

**SAF-B00-004**  
**Industrial Hygiene Sampling – Airborne**  
**FINAL DATA**

**ORIGINAL MUST BE  
SENT TO CLIENT  
SAMPLE MANAGEMENT  
KEEPS A COPY**

**COMPLETE DATA PACKAGE TO:**

Denise Pitts

X2-09

NB/11/29/04  
INITIAL/DATE

**COMMENTS: (PLEASE INCLUDE THE FOLLOWING ON THE FAX COVER SHEET)**

SDG

D00456

SAF-B00-004

Rad only   X   Chem only   Rad & Chem

X Complete

Partial

**303G & 303F**



## Cover Page

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Report Identification Number: 04I-3694-01  
Subcontract Number: 000X-B0-G0058-B-Mod#3  
Name of Industrial Hygienist: Henry W. Ruby and Denise A. Pitts  
Laboratory Identification Number: DCHM  
SAF #: B00-004; B00-005  
Payroll #: 72520

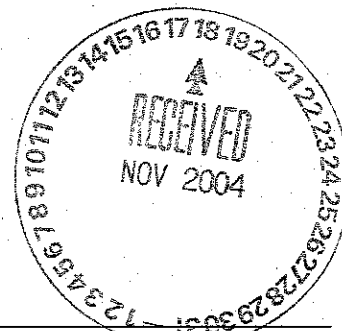
### Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
16-NOV-2004	J02037	04I34570	NMAM7300M	G04BJ00S	MCE Air Filter
16-NOV-2004	J02038	04I34571	NMAM7300M	G04BJ00S	MCE Air Filter
16-NOV-2004	J02039	04I34572	NMAM7300M	G04BJ00S	MCE Air Filter
16-NOV-2004	J02040	04I34573	NMAM7300M	G04BJ00S	MCE Air Filter
16-NOV-2004	J02029	04I34574	NMAM7300M	G04BJ00S	MCE Air Filter

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Name: Lisa M. Reid  
Title: Chemist  
Date: November 18, 2004

D00456



*Lab mailed directly to client*

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Report Identification Number: 04I-3694-01  
Subcontract Number: 000X-B0-G0058-B-Mod#3  
Name of Industrial Hygienist: Henry W. Ruby and Denise A. Pitts  
Laboratory Identification Number: DCHM  
SAF #: B00-004; B00-005  
Payroll #: 72520

**General Set Information:** There are 5 samples in set 04I-3694-01. The samples were analyzed for beryllium on MCE filters by ICP. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

**Method Summary:** Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block at 110°C for 40 minutes. Samples were then diluted to volume with ASTM Type II Water. Samples were shaken and delivered vials for ICP analysis.

**Sample Preparation:** All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

**Holding Times:** The holding times were met for both sample preparation and analysis.

**Instrument Calibration:** Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

**Initial and Continuing Calibration Verification Analysis:** Beryllium recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of  $\pm 10\%$ .

**Initial and Continuing Calibration Blank Analysis:** No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 0.02 ug/sample.

**Method Blank Analysis:** No beryllium was found in the media blank sample above the Contract Required Detection Limit (CRDL).

**Dilution(s):** None of the samples were diluted.

**Laboratory Control Sample and Duplicate Analysis:** One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS result is within control limits of  $\pm 20\%$ . The Relative Percent Difference (RPD) between the LCS and LCSD is within the control limit of 20%.

**Replicate Analysis:** One sample in this batch was replicated. The RPD between the sample and the replicate is within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

**Flagging Codes:**

U - Analyte not detected above the Method Detection Limit (MDL) of 0.005 ug/sample.

J - Analyte result is reported above the Method Detection Limit (MDL) of 0.005 ug/sample, but below the Contract Required Detection Limit (CRDL) of 0.02 ug/sample.

**Nonconformance/Corrective Action Report (NC/CAR):** None.

**Sample Calculation:** The final results are calculated by the following equation:

Final result for aqueous samples ( $\mu\text{g}/\text{sample}$ ) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ( $\mu\text{g}/\text{L}$ )

B = Concentration factor from sample preparation

=  $\frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$

Sample

C = Dilution performed at time of analysis

Example Calculation:  $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

**Miscellaneous Comments:** None.



## Report Page

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Report Identification Number: 04I-3694-01

Subcontract Number: 000X-B0-G0058-B-Mod#3

Name of Industrial Hygienist: Henry W. Ruby and Denise A. Pitts

Laboratory Identification Number: DCHM

SAF #: B00-004; B00-005

Payroll #: 72520

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium ug/M3		Beryllium ug/sample	
J02037	04I34570	17 Nov 2004	<3.3E-6	U	<0.02	U
J02038	04I34571	17 Nov 2004	<3.2E-6	U	<0.02	U
J02039	04I34572	17 Nov 2004	<3.5E-6	U	<0.02	U
J02040	04I34573	17 Nov 2004	**		<0.02	U
J02029	04I34574	17 Nov 2004	**		<0.02	U
Limit of Detection (LOD)					0.005	
Required Detection Limit (RDL)					0.02	

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.



## QC Summary Page

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Report Identification Number: 04I-3694-01  
Subcontract Number: 000X-B0-G0058-B-Mod#3  
Name of Industrial Hygienist: Henry W. Ruby and Denise A. Pitts  
Laboratory Identification Number: DCHM  
SAF #: B00-004; B00-005  
Payroll #: 72520

Batch ID: G04BJ00S

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-225702-1	MB	Beryllium	ug/sample	ND	NA	NA	NA	NA
QC-225702-1	LCS	Beryllium	ug/sample	10.3	NA	10.0	103.	NA
QD-225702-1	LCSD	Beryllium	ug/sample	10.5	10.3	10.0	105.	2.05

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

$LCS, LCSD \text{ Percent Rec.} = (\text{Result} / \text{Target}) * 100.0$

$MS, MSD \text{ Percent Rec.} = ((\text{Result} - \text{Parent}) / \text{Target}) * 100.0$

$LCS, LCSD \text{ Relative Percent Diff.} = ( (|LCS - LCSD|) / ((LCS + LCSD)/2.0) ) * 100.$

$MS, MSD \text{ Relative Percent Diff.} = ( (|MS - MSD|) / ((MS + MSD)/2.0) ) * 100.$

$LD \text{ Relative Percent Diff.} = ( (|Parent - LD|) / ((Parent + LD)/2.0) ) * 100$

04I-3694-01

Bechtel Hanford, Inc.		ERC/INDUSTRIAL HYGIENE CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST									
Collector: <i>Cynthia Williams</i>	Company Contact: Henry W. Ruby and Denise A. Pitts	Telephone No. 373-5600			Project Coordinator Joan H. Kessner			Data Turnaround <b>TWO DAYS</b>			
Payroll #: <i>72520</i>	Sampling Location <i>300 area / 3036 / 303F</i>	SPECIAL INSTRUCTIONS All relevant COAs must be provided: <i>R300 XX J451</i> ANALYSIS METHOD (SPECIFIC): <i>7300</i>			SAF No. B00-004; B00-005			Method of Shipment <i>FED EX</i>			
Type of Sample: <i>Area</i>											
Shipped To: <i>Datachem</i>					Bill of Lading/Air Bill No. <i>8457 9149 9497</i>						
Possible Sample Hazard/Remarks: <i>Beryllium</i>	MATRIX A - AIR WI - WIPE X - OTHER	Preservation (ie., cooling required, etc.)	No	No	NO						
Special Handling and/or Storage <i>N/A</i>			Asbestos Airborne	Lead Airborne	Beryllium Airborne						
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L)	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne				
J02037	A	11-16-04	1508	<i>CSW</i>			X	<i>04I34570</i>			
J02038	A	11-16-04	1543	<i>11-16-04</i>			X	<i>71</i>			
J02039	A	11-16-04	1424				X	<i>72</i>			
J02040	A	11-16-04	N/A	<i>Blank</i>			X	<i>73</i>			
J02029	A	11-16-04	N/A	<i>Blank</i>			X	<i>74</i>			
<i>CSW</i> <i>11-16-04</i>											

COC Page

ERC/INDUSTRIAL HYGIENE CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Cynthia Williams Cynthia Williams	11-16-04/1325	SJGALE Sjgale	11-16-04 1325
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
SJGALE Sjgale	11-16-04 1340	FED EX	
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Fed Ex		Kevin Griffiths	11-17-04 9:40
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
Relinquished By/Store:	DATE/TIME	Received By/Store:	DATE/TIME
LABORATORY SECTION	Received By	Title	DATE/TIME

DATE: \_\_\_\_\_

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